

10/511881

Amendments to the Specification:  
Page 2, line 25 to page 3, line 24  
Please replace page 3 with the following:

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increases typically would require structure reinforcement or replacement, wherein  
5 such infrastructure modifications are typically not financially feasible. Thus, there is  
financial motivation to increase the load capacity on electrical transmission cables  
while using the existing transmission liens.

European Patent Application No. ~~EP116374A3~~ EP1168374A3 discloses a  
composite core comprised of a single type of reinforced glass fiber and thermoplastic  
10 resin. The object is to provide an electrical transmission cable which utilizes a  
reinforced plastic composite core as a load bearing element in the cable and to provide  
a method of carrying electrical current through an electrical transmission cable which  
utilizes an inner reinforced plastic core. The composite core fails in these objectives.  
A one fiber system comprising glass fiber does have the required stiffness to attract  
15 transfer load and keep the cable from sagging. Secondly, a composite core  
comprising glass fiber and thermoplastic resin does not meet the operating  
temperatures required for increased ampacity, namely, between 90 and 230 °C.

Composite cores designed using a carbon epoxy composite core also have  
inherent difficulties. The carbon epoxy core has very limited flexibility and is cost  
20 prohibitive. The cable product having a carbon epoxy core does not have sufficient  
flexibility to permit winding and transport. Moreover, the cost for carbon fibers are  
expensive compared to other available fibers. The cost for carbon fibers is in the  
range of \$5 to \$37 per pound compared to glass fibers in the range of \$.36 to \$1.20  
per pound. Accordingly, a composite core constructed of only carbon fibers is not  
25 financially feasible.

Physical properties of composite cores are further limited by processing  
methods. Previous processing methods cannot achieve a high fiber/resin ratio by  
volume or weight. These processes do not allow for creation of a fiber rich core that